Indiana Traffic Safety Facts 2004

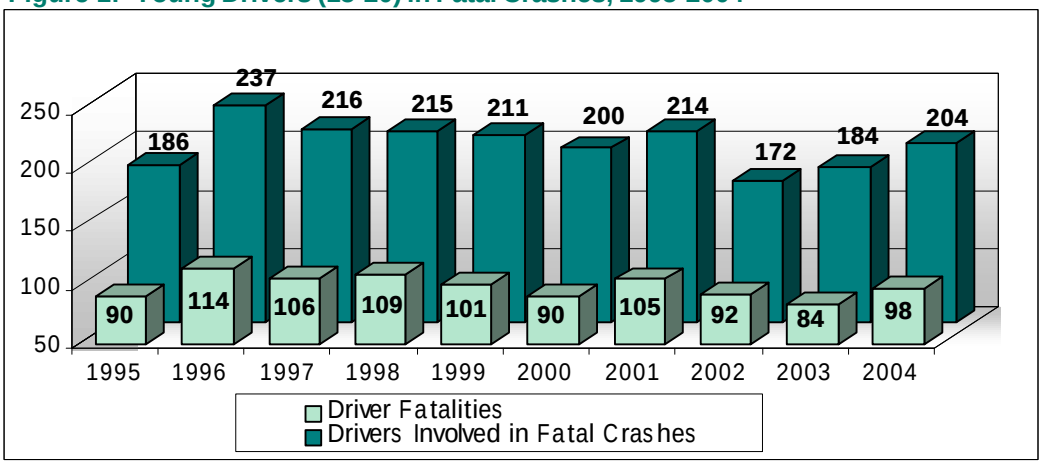
Young Drivers

http://www.in.gov/cji

In 2004, 98 young drivers were killed in a fatal crash.

In 2004, 298,321 of Indiana's 4,521,329 licensed drivers were between the ages of 16 and 20. These young drivers accounted for 6.6 percent of Indiana's total licensed population. (Please note that while 15 year olds are not included in these licensed driver counts because they are only eligible to receive a learner's permit[1], not an operator's license, 15-year olds are included in the majority of the discussion pertaining to young drivers in fatal crashes in this fact sheet). Nationally, the highest fatality and injury rate per 100,000 population was found among 15–20 year-olds.[2] In Indiana, of the 204 young drivers age 15-20 involved in a fatal crash in 2004, 98 were killed.

Figure 1: Young Drivers (15-20) in Fatal Crashes, 1995-2004



Indiana implemented the Graduated Driver's Licensing (GDL) Law in January 1999 to combat the problem of inexperienced drivers being involved in fatal crashes. The law restricts any driver under the age of eighteen to a probationary license subject to the following conditions: 1) an individual may not operate a motor vehicle during curfew hours,[3] and 2) the individual may not transport other passengers in the first 90 days of licensure without a licensed driver at least 21 years of age present in the front seat of the vehicle.

The number of 15–20-year-old drivers involved in fatal crashes fluctuates substantially from year to year (as seen in Figure 1) due to the relatively small number of fatal crashes involving this age group. Table 1 presents averages for the six-year period before the passage of the GDL Law (1993–1998) and the six-year period subsequent to the law's passage (1999–2004). When the figures are compared to changes in older drivers in fatal crashes in recent years in Indiana, it seems the law has had limited impact on improving the safety of young drivers.

Table 1: Young Drivers (15-20) Involved in Fatal Crashes, 1993-2004

	1993–1998 Annual Average	1999–2004 Annual Average	% Change Subsequent to GDL Passage
Young Driver Fatalities	103	95	-7.5%
Young Drivers Involved in Fatal Crashes	211	198	-6.5%
Driver Fatalities (>20 years of age)	520	508	-2.3%
Drivers Involved in Fatal Crashes (>20 years of age)	1,126	1,078	-4.3%

Please note that drivers under age 15 and of unknown age are excluded from the table.

[1] See Indiana Code for definition of a learner's permit: http://www.in.gov/legislative/ic/code/title9/ar24/ch7.html

[2] From the US Department of Transportation National Highway Traffic Safety Administration's Traffic Safety Facts 2004. Available online at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2004EE.pdf.

[3] Curfew violations occur between 1 AM and 5 AM on Saturday or Sunday; after 11 PM on Sunday, Monday, Tuesday, Wednesday, or Thursday; or before 5 AM on Monday, Tuesday, Wednesday, Thursday, or Friday.

Table 2 displays the number of 15 through 17-year-old drivers involved in fatal crashes during curfew hours. Of all 15 through 17-year old drivers involved in fatal crashes, the percentage that were involved in curfew hour crashes peaked at 11.4 percent in 2000 (one year after the law went into effect). Between 1999 and 2004, the rate was 8.1%, compared to 6.9% between 1993-1998, showing no clear evidence for a decrease due to the implementation of the GDL.

Table 2: Fifteen through Seventeen Year-Old Drivers Involved in Fatal Crashes

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
During Curfew Hours	4	7	9	7	5	6	9	8	5	5	4
All Hours*	90	69	93	90	81	78	79	79	68	68	82
% of Drivers Involved in Fatal Crashes During Curfew Hours	4.4%	10.1%	9.7%	7.8%	6.2%	7.7%	11.4%	10.1%	7.4%	7.4%	4.9%

*Please note that these totals exclude those drivers involved in fatal crashes at an unknown hour.

In 2004, 15.3 percent of all the drivers involved in fatal crashes were age 15-20.

Nationally in 2004, 13.8 percent (7,898) of the 57,170 drivers involved in fatal crashes with a known age were young drivers (15-20). In Indiana in 2004, 15.3 percent (204) of the 1,331 drivers involved in fatal crashes with known age were 15–20 years of age. Young drivers are also much more likely to be involved in a single vehicle fatal crash than drivers in the older age groups (Table 3).

Table 3: Age Distribution of Licensed Drivers and Drivers Involved in Fatal Crashes Age 16 and Older, 2004

	Age Group (Years)							
	16-20	21-24	25-34	35-44	45-54	55-64	65-74	>74
	Age Distribution of Indiana Licensed Drivers							
	6.6%	6.7%	17.5%	19.3%	19.5%	14.1%	8.7%	7.6%
	Age Distribution of Drivers Involved in Indiana Fatal Crashes*							
Single Vehicle	20.4%	13.9%	19.7%	14.6%	14.3%	8.7%	5.4%	2.9%
Multiple Vehicle	12.5%	8.8%	19.2%	18.6%	16.6%	11.8%	5.2%	7.2%
All Fatal Crashes	15.2%	10.5%	19.4%	17.2%	15.9%	10.8%	5.3%	5.7%
Drivers Involved in Fatal Crashes per 1,000 Licensed Drivers	0.67	0.46	0.32	0.26	0.24	0.22	0.18	0.22

*Because only drivers age 16 and older are included in licensed driver counts, totals referenced to compute percentages exclude those drivers under age 16 and those of unknown age.

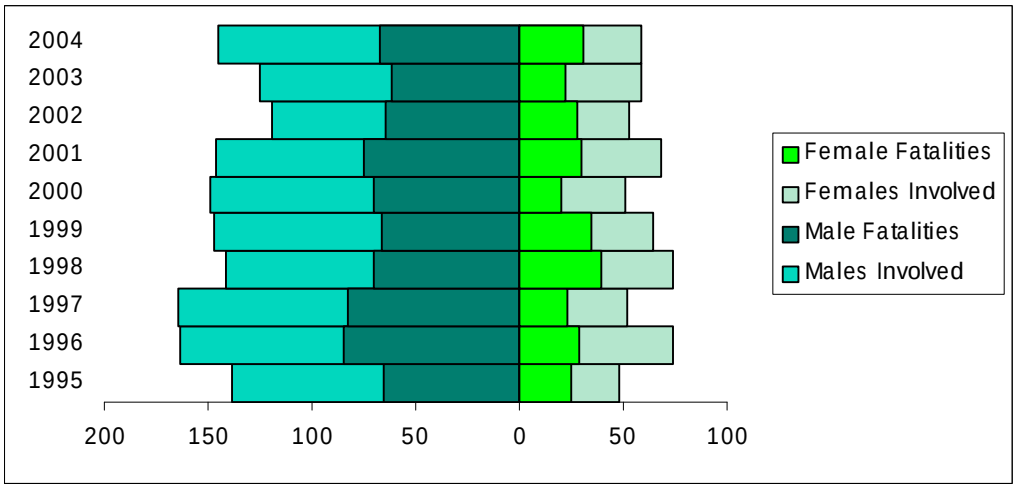
While only 6.6% of all licensed drivers were between the ages of 16 and 20, this age group accounted for 20.4% of all drivers age 16 and above involved in fatal single vehicle crashes.

Young male driver fatalities age 15-20 in Indiana in 2004 (67) were drastically higher than the number of young female driver fatalities (31). As shown in Figure 2, the number of young male driver fatalities was even greater than the total number of young female drivers involved in fatal crashes. The same trend is seen nationally: in 2004 there were 5,540 young male drivers involved in fatal crashes resulting in 2,593 young male driver fatalities, compared to 2,358 young female drivers involved in fatal crashes resulting in 1,027 young female driver fatalities.

Table 4: Number of Driver Fatalities Age 15–20 Years Old by Gender, 1995-2004

Gender	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Male Fatalities	65	85	83	70	66	70	75	64	62	67
Female Fatalities	25	29	23	39	35	20	30	28	22	31
Total Fatalities	90	114	106	109	101	90	105	92	84	98

Figure 2: Young Driver Fatalities and Drivers Involved in Fatal Crashes by Year & Gender



Alcohol

16.1 percent of young drivers involved in fatal crashes were intoxicated.

A motor vehicle crash is considered to be alcohol-related if at least one driver or nonoccupant (such as a pedestrian or pedalcyclist) involved in the crash is determined to have had a blood alcohol concentration (BAC) of .01 grams per deciliter (g/dL) or higher. Thus, any fatality that occurs in an alcohol-related crash is considered an alcohol-related fatality. The term "alcohol-related" does not indicate that a crash or fatality was caused by the presence of alcohol. Unfortunately, known blood alcohol content (BAC) test results are not available for all drivers and nonoccupants involved in fatal crashes. Missing data can result for a number of reasons, the most frequent of which is that persons are not always tested for alcohol. For example, in 2004, blood alcohol content was either unknown, unreported, or no test was given for 51 out of the 204 15-20-year-old drivers involved in fatal crashes. In 2001, NHTSA began using a revised statistical method—multiple imputation—to estimate missing information about blood alcohol concentration levels for persons involved in fatal crashes. All of the information presented in this fact sheet pertaining to alcohol is based on the new imputation method. Alcohol rates are estimates that represent a mix of both known and estimated BACs. More information on the new multiple imputation method, including detailed tabulations of alcohol involvement in various categories (age, gender, time of day, etc.), is available in NHTSA's Technical Report DOT HS 809 403, "Transitioning to Multiple Imputation: A New Method to Estimate Missing Blood Alcohol Concentration (BAC) Values in FARS."

Of the young drivers involved in fatal crashes in Indiana in 2004, 3.7 percent (8 out of 204) had BAC levels of 0.01 g/dl to 0.07 g/dl and 16.1 percent (33 out of 204) were intoxicated (BAC of 0.08 g/dl or above) at the time of the crash.

The national numbers for alcohol involvement among young drivers in 2004 were very similar to the numbers seen in Indiana. Nationally, 4.7 percent of young drivers involved in fatal crashes had BAC levels of 0.01 g/dl to 0.07 g/dl, and 16.9 percent had a BAC of 0.08 g/dl or above.

License Compliance

As illustrated in Table 5, 11.4 percent of the 202 young drivers involved in fatal crashes with known license status in 2004 were not holding valid licenses for the vehicle they were operating at the time of the crash, and 45.5 percent of these young drivers with invalid licenses had a previous license suspension.

Young drivers continue to have the highest fatality rates per licensed driver.

Table 5: Drivers 15–20 Years Old Involved in Indiana Fatal Crashes by Previous Driving Record and License Status, 2004

	License Status								
	Valid (179)			Invalid (23)			Total (204)*		
Driving Record	Number	Percent	National Percent	Number	Percent	National Percent	Number	Percent	National Percent
Previous Recorded Suspensions	14	7.8%	7.8%	10	45.5%	29.7%	24	11.9%	11.1%
Previous DWI Convictions	3	1.7%	0.9%	0	0.0%	5.4%	3	1.5%	1.6%
Previous Speeding Convictions	38	21.2%	22.9%	7	31.8%	15.6%	45	22.4%	21.8%
Previous Other Harmful or Moving Conviction	44	24.6%	18.3%	8	36.4%	21.3%	52	25.9%	18.7%

*Does not equal sum of valid and invalid license groups due to 2 drivers of unknown license status. Please note that for the purposes of computing percentages, drivers with unknown previous driving records were excluded from these displayed totals as necessary.

Restraint Use

34 of the 69 young passenger vehicle drivers killed (with known restraint usage) were not restrained.

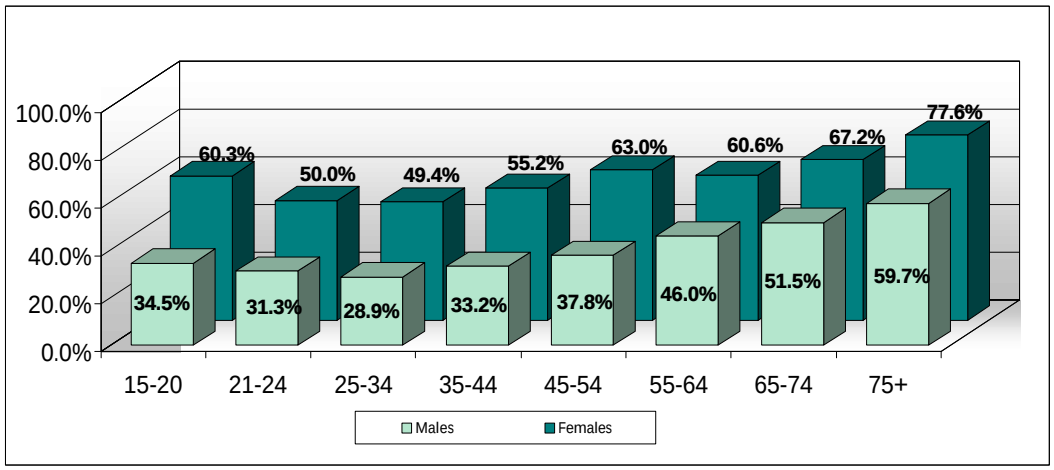
The safety belt usage rate for young passenger-vehicle[4] driver fatalities in Indiana decreased slightly from 51.4 percent in 2003, to 50.7 percent in 2004. This means that 34 of the 69 fatalities where restraint use was known in 2004 were not restrained. Of the young male passenger vehicle drivers killed, 23 of the 45 with known restraint usage (51.1 percent) were not wearing a safety belt at the time of their crash and 11 of the 24 young female drivers killed with known restraint usage (45.8 percent) were not restrained. Safety belts are estimated to reduce the risk of fatal injury by 45 percent in passenger cars and by 60 percent in pickup trucks.[5] Proper restraint use does not guarantee an occupant's safety, but for 2004, it is estimated that safety belts could have saved approximately 15 young passenger vehicle drivers who chose not to buckle up. In Figure 3, five years of data have been combined so that restraint usage rates can be broken down by age and gender.

Motorcycle operators[6] between the ages of 15 and 20 comprised 8.4 percent of all motorcycle operators involved in a fatal crash in 2004 (8 out of 95). All 8 of them were killed. Only 7 had known helmet usage, and of these 7, only 4 of them were wearing a helmet. According to NHTSA, a helmet is estimated to be 37 percent effective in preventing a fatal injury for a motorcyclist.[7]

Nationally in 2004, more than 1/3 of the young motorcycle operators involved in fatal crashes were not compliant with the licensing requirements of the vehicle at the time of the crash. In Indiana in 2004, 2 of the 8 young motorcycle operators involved in fatal crashes were not compliant.

[4] Passenger vehicles include passenger cars, SUV's, minivans and vans, pickups, and other light trucks.
[5] More information available from NHTSA online at http://www.nhtsa.dot.gov/staticfiles/DOT/NHTSA/Communication%20&%20Consumer%20Information/Articles/Associated%20Files/EconomicImpact2000.pdf.
[6] Numbers pertain only to body type "motorcycle" in the FAR's database (other motorized bikes included in NHTSA's definition of "motorcycle" are excluded.) All other vehicle types are as defined by NHTSA.
[7] From the US Department of Transportation National Highway Traffic Safety Administration's Traffic Safety Facts 2004. Available online at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2004EE.pdf.

Figure 3: Restraint Usage Rates for Indiana Passenger Vehicle Driver Fatalities by Age and Gender, 2000-2004



Drivers with unknown restraint usage are excluded from totals referenced to compute percentages.

Conclusion

Unfortunately, the restrictions and guidelines of Indiana's GDL have yet to indicate a positive impact on the involvement of young drivers in fatal crashes. Young drivers continue to have the highest fatality rates per licensed driver (more than twice as high as drivers over 20 years of age) and the involvement of young drivers in fatal crashes during curfew hours likewise continues to be a problem. Young male drivers are a particularly serious concern due to the fact that pickup trucks are often their vehicle of choice. Instances of alcohol and drug use among young drivers involved in fatal crashes are also cause for grave concern. While young drivers are subject to the safety belt law in passenger cars, Indiana's failure to update the current primary law to include pickup trucks and vehicles plated as trucks represents a serious contradiction to this group. The existing GDL is difficult at best to enforce because a teen driver cannot be stopped to have his or her driver's license inspected merely because he or she "looks" young; a law enforcement officer must have probable cause of some other reason to initiate a traffic stop. Therefore, in order for the 90-day passenger restriction and the curfew component of the GDL law to be effective, parents need to become willing and interested participants in their teens' driving activities. The responsibility for abiding by the existing law falls solely on the parent/legal guardian. Tighter, enforceable licensing restrictions that cover a longer period of time may be a viable solution. This would allow the young driver to gain valuable driving experience with fewer distractions.

This publication was prepared on behalf of the Indiana Criminal Justice Institute by Purdue University's Center for the Advancement of Transportation Safety. All information contained within was gathered from the Fatality Analysis Reporting System (FARS) Web-Based Encyclopedia provided by the National Highway Traffic Safety Administration (NHTSA) available at http://www.fars.nhtsa.dot.gov. All figures are considered current as of September 27, 2005. Please direct any questions concerning data in this document to the Center for the Advancement of Transportation Safety, Purdue University, 1291-F Cumberland Ave., West Lafayette, IN 47906-1385, 765-494-7038.